IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: **Brokenshire et al.**	§	
	§	
Serial No.: **09/833,348**	§	Group Art Unit: **2628**
	§	
Filed: **April 12, 2001**	§	Examiner: **Amini, Javid A.**
	§	
For: **Method and Apparatus for Generating Gamma Corrected Antialiased Lines**	§	Attorney Docket No.: **AUS920010010US1**
	§	

35525
PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A Notice of Non-Compliant Appeal Brief in the form of an Office Communication was received by Applicant stating that "the appeal brief filed on September 22, 2005, is defective, the Appeal Brief should be in compliant with the headings as set forth in the new rules under 37 C.F.R. 41.37(c)". A copy of the Notice of Non-Compliant Appeal Brief is attached hereto.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

In response to the Notification of Non-Compliant Appeal Brief dated December 18, 2007, please reconsider the holding of non-compliance as follows:

REMARKS

In the Notification of Non-Compliant Appeal Brief, the Appeal Brief filed on September 22, 2005, was held defective and needs to be compliant with the headings as set forth in the new rules under 37 C.F.R. 41.37(c)

In order to address the Examiner's concerns, a Supplemental Appeal Brief is submitted herewith. It is respectfully submitted that the Supplemental Appeal Brief filed herewith is in compliance with 37 C.F.R. § 41.37. Appellant respectfully requests that the Supplemental Appeal Brief be entered.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Date: January 18, 2008

Respectfully submitted,

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SUPPLEMENTAL APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on December 19, 2003.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-23

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-23
4. Claims allowed: None
5. Claims rejected: 1-23
6. Claims objected to: 1-23

C. CLAIMS ON APPEAL

The claims on appeal are: 1-23

STATUS OF AMENDMENTS

No claim amendments have been filed subsequent to the close of prosecution.

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The subject matter of claim 1 is directed to a method in a data processing system (Specification, page 1, lines 6-10; page 7, line 4-page 10, line 24; **Figure 1** (item **100**) and **Figure 2** (item **200**)) for antialiasing lines for display (Specification, page 4, lines 4-8 and page 11, lines 4-9). Graphics data for display is received, wherein the graphics data includes primitives defining lines (Specification, page 11, lines 4-9), page 14, lines 7-14, and **Figure 7** (item **700**)). A gamma correction is applied to the graphics data on a per primitive basis to form the antialiased lines (Specification, page 11, lines 4-21, page 14, lines 14-17 and **Figure 7** (item **706**)), wherein the gamma correction is applied only to the primitives defining lines (Specification, page 11, line 22-page 12, line 5). The antialiased lines are displayed (Specification, page 7, lines 8-10, page 11, lines 7-9, page 14, lines 6-21, and **Figure 1** (item **102**)).

B. CLAIM 7 - INDEPENDENT

The subject matter of claim 7 is directed to a data processing system (Specification, page 1, lines 6-10; page 7, line 4-page 10, line 24; **Figure 1** (item **100**) and **Figure 2** (item **200**)). The system has a bus system (Specification, page 8, lines 11-13 and **Figure 2** (item **206**)), a communications unit connected to the bus, wherein data is sent and received using the communications unit (Specification, page 9, lines 24-28 and **Figure 2** (items **210, 212**), and a memory (Specification, page 8, line 22, page 11, lines 14-17 and **Figure 2** (item **224**) and **Figure 3** (item **306**)) connected to the bus system, wherein a set of instructions and data including a gamma correction table (Specification, page 11, lines 14-17 and **Figure 3** (item **312**)) are located in the memory. A processor unit is connected to the bus system, wherein the processor unit executes the set of instructions to receive graphics data for display (page 10, lines 12-16; **Figure 2** (item **202**)) wherein the graphics data includes primitives defining lines, apply a gamma correction; and to the graphics data on a per primitive basis to form antialiased lines

(Specification, page 11, lines 4-21, page 14, lines 14-17 and **Figure 7** (item **706**)), wherein the gamma correction is applied only to the primitives defining lines (Specification, page 11, line 22-page 12, line 5), and display the antialiased lines (Specification, page 7, lines 8-10, page 11, lines 7-9, page 14, lines 6-21, and **Figure 1** (item **102**)).

C. CLAIM 13 - INDEPENDENT

The subject matter of claim 13 is directed to a data processing system for antialiasing lines (Specification, page 2, line 17 through page 3, line 5) for display. The system has receiving means for receiving graphics data for display (page 10, lines 12-16; **Figure 2** (item **202**)), wherein the graphics data includes primitives defining lines (Specification, page 14, lines 7-14, and **Figure 7** (item **700**)), applying means for applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines (Specification, page 11, lines 4-21, page 14, lines 14-17 and **Figure 7** (item **706**)), wherein the gamma correction is applied only to the primitives defining lines (Specification, page 11, line 22-page 12, line 5); and displaying means for displaying the antialiased lines (Specification, page 7, lines 8-10, page 11, lines 7-9, page 14, lines 6-21, and **Figure 1** (item **102**)).

D. CLAIM 18 - DEPENDENT

The subject matter of claim 18 is directed to the data processing system of claim 13, wherein the applying means includes means for adjusting intensity of pixel (Specification, page 17, line 26-page 18, line 6) defining the primitives.

E. CLAIM 19 - INDEPENDENT

The subject matter of claim 19 is directed to a computer program product in a computer readable medium (Specification, page 18, lines 7-25). The computer program product includes first instructions for receiving graphics data for display wherein the graphics data includes primitives defining lines (Specification, page 14, lines 7-14, and **Figure 7** (item **700**)), second

instructions for applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines (Specification, page 11, lines 4-21, page 14, lines 14-17 and **Figure 7** (item **706**)), wherein the gamma correction is applied only to the primitives defining lines (Specification, page 11, line 22-page 12, line 5); and third instructions for displaying the antialiased lines (Specification, page 7, lines 8-10, page 11, lines 7-9, page 14, lines 6-21, and **Figure 1** (item **102**)).

F. CLAIM 20 - INDEPENDENT

The subject matter of claim 20 is directed to an apparatus (Specification, page 1, lines 6-10; page 3, lines 3-5; page 4, lines 5-16; page 10, lines 17-24, and page 17, line 26 through page 18, line 6). The apparatus has an input (Specification, page 7, lines 4-27; page 11, line 22 through page 12, line 5, page 12, line 23 through page 13, line 4, page 17, lines 1-15 and **Figure 4**), wherein position information (Specification, page 2, lines 1-16 and page 11, lines 4-21) for a pixel is received at the input. A coverage interpolation unit (Specification, page 16, lines; and **Figure 9** (item **902**)) is connected to the input, wherein the coverage interpolation unit generates a coverage valued at a first output in which the coverage value identifies how much of the pixel is covered at a first output (Specification, page 16, lines 21-24). An alpha interpolation unit is connected to the input (Specification, page 16, line 10, and **Figure 9** (item **904**)), wherein the alpha interpolation unit identifies a degree of transparency for the pixel as an opacity value at a second output (Specification, page 16, lines 24-25). A color interpolation unit is connected to the input (Specification, page 16, line 11, and **Figure 9** (item **906**)) wherein the color interpolation unit generates a red, green, and blue value for the pixel at a third output (Specification, page 16, lines 25-27) and a gamma correction unit is connected to the first output (Specification, page 17, lines 1-4, and **Figure 9** (item **914**)) wherein the gamma correction unit generates a gamma corrected value for the pixel using the coverage value at a fourth output, wherein the gamma correction unit only generates a gamma corrected value for pixels that are part of a line (Specification, page 17, lines 1-15). A modulate unit (Specification, page 17, line 9 and **Figure 9** (item **910**)); is connected to the second output and the fourth output, wherein the modulate unit adjusts the gamma corrected value to the opacity value to generate an adjusted gamma corrected

value at a fifth output (Specification, page 17, lines 4-11); a frame buffer (Specification, page 17, line 7 and **Figure 9** (item **916**)) having a sixth output, wherein the frame buffer holds a final pixel value (Specification, page 17, lines 6-9); and a blend unit connected to the fifth output and the third output (Specification, page 17, line 11 and **Figure 9** (item **912**)), wherein the blend unit blends the adjusted gamma corrected value and the red, green, and blue value for the pixel with a current pixel value from the sixth output of the frame buffer to form the final pixel value for display (Specification, page 11, lines 7-9, page 17, lines 11-15).

G. CLAIM 22 - INDEPENDENT

The subject matter of claim 22 is directed to a method in a data processing system (Specification, page 1, lines 6-10; page 7, line 4-page 10, line 24; **Figure 1** (item **100**) and **Figure 2** (item **200**)) for antialiasing lines for display (Specification, page 4, lines 5-8). The method includes generating graphics data for display (Specification, page 13, lines 8-14, and **Figure 5** (item **500**)); and determining whether the graphics data comprises a line (Specification, page 13, lines 14-15, and **Figure 5** (item **502**)). If the graphics data comprises a line, the graphics data is sent to an adapter (Specification, page 13, lines 15-16 and **Figure 5** (item **504**)). A gamma correction is applied to the graphics data to form an antialiased line (Specification, page 16, line 16-page 17, line 15 and **Figure 9**).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to review on appeal are as follows:

1. Whether claims 1-7, 13-18, 19-20, 22, and 23 are anticipated over Warren et al., US Patent No. 6,304,300 (hereinafter "Warren") under 35 U.S.C. § 102(e) ; and

2. Whether claims 8, 11, and 12 are unpatentable under 35 U.S.C. § 112, first paragraph, as based on a disclosure which is not enabling.

ARGUMENT

A. GROUND OF REJECTION 1 (Claims 1-7, 13-18, 19-20, 22, and 23)

A.1. Claims 1-7, 9-10, 13-23

I. 35 U.S.C. § 102(e), Anticipation, Claims 1-7, 9-10, 13-23 (Group A)

In rejecting the claims, Examiner states:

> "A method in a data processing system for antialiasing lines for display, the method comprising: receiving graphics data for display, wherein the graphics data includes primitives defining lines; applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines, wherein the gamma correction is applied only to the primitives defining lines; and displaying the antialiased lines", as applicant in the specification page 2, lines 5-10, discloses a primitive is a graphics element that is used as a building block for creating images, such as, a point, a line, a polygon, or text. Warren et al. in Fig. 9 and in (col. 10, lines 51-54) teach the pixel data is then sent to the rasterization unit 906, where Z-buffering, blending, texturing, and antialiasing functions are performed. And also discloses in abstract that the gamma correction curve table includes a specified total number of intensity levels associated with gamma corrected pixel values with one intensity level per pixel value. The method includes partitioning the gamma correction curve table into N segments such that each of the N segments is associated with a set of intensity levels from the specified total number of intensity levels. Also see (col. 9, lines 44-65) The geometry unit 902 converts the graphical data from the processor 804 into a screen coordinate system and performs rejection and transformation processes to give depth to a displayed object. The resulting primitives (points, lines, polygons, polyhedra, and the like) supplied by the geometry unit 902 are then provided to the scan conversion unit 904.

Office action of 9/24/03, pages 3-4.

1. The cited reference, Warren, does not teach all claimed limitations.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). In the present cast, the Examiner has failed to cite a reference teaching or suggesting the

claim limitation of, "wherein the gamma correction is applied only to the primitives defining lines," as claimed in, for example, claim 1. Claim 1 is reproduced for discussion:

1. A method in a data processing system for antialiasing lines for display, the method comprising:

receiving graphics data for display, wherein the graphics data includes primitives defining lines;

applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines, wherein the gamma correction is applied only to the primitives defining lines; and

displaying the antialiased lines.

It is respectfully submitted that the cited reference (Warren et al.) does not teach or suggest applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines, as claimed. More specifically, it is respectfully submitted that Warren does not teach the claimed limitations of, "wherein the gamma correction is applied only to the primitives defining lines," as claimed in at least claim 1.

Warren explicitly teaches away from the present invention, because it teaches that gamma correction is applied to all primitives. To the contrary, the present invention teaches that gamma correction is applied only to primitives defining lines.

There are several advantages to the present invention not obtained from the teaching of Warren. For example, by applying gamma correction to all primitives, color intensity dampening occurs, as is typical in gamma correcting systems. Further, by not applying gamma correction to all pixels, and by only applying it to primitives that define lines, computational advantages are gained by the teaching of the present invention. Warren, however, explicitly teaches away from such advantages by teaching that gamma correction is applied to all pixels, regardless of the resulting primitive.

Warren is directed to a system for partitioning a gamma correction table into segments, each segment corresponding to a particular intensity level or range of intensity levels. For example, col. 3, lines 9-26, state:

> The gamma correction curve table includes a specified total number of intensity levels associated with gamma corrected pixel values, with one intensity level per pixel value. The method includes partitioning the gamma correction curve table into N segments such that each of the N segments is associated with a set of intensity levels from the specified total number of intensity levels. A plurality of intensity levels is selected for each of the N segments. The intensity levels are preferably selected such that significant banding effects are not visible to the human eye between an adjacent pair of selected intensity levels. The gamma corrected pixel values are stored for each of the N segments such that each of the plurality of selected intensity levels functions as an index to the associated gamma corrected pixel values. Gamma correction is performed on the set of pixel data by accessing a stored pixel value in one of the N segments in response to the pixel data, to generate gamma corrected pixel data.

This passage depicts a gamma correction table with multiple segments, but it does not teach the claimed limitation of, "wherein the gamma correction is applied only to the primitives defining lines," as claimed in at least claim 1. To the contrary, it appears that Warren, like other conventional gamma correction systems, applies gamma correction to all pixel values and not just to those forming lines. In other words, the segmented gamma correction table of Warren applies its correction to all pixels, thus failing to achieve the advantages of the present invention, which include avoiding color intensity dampening that occurs with typical gamma corrections. It also fails to obtain the computational advantages of not applying gamma correction to all pixels.

Examiner cites Warren at FIG. 9 and col. 9, lines 44-65. Col. 10 describes FIG. 9, and is partially reproduced here, at col. 10, lines 44-65:

> FIG. 9 illustrates a more detailed block diagram of the graphics subsystem 812 in accordance with one embodiment of the present invention. The object data is processed by graphics subsystem 812 in the following pipelined stages: a geometry unit 902, a scan conversion unit 904, a rasterization unit 906, a frame buffer 908, and a display unit 910. The geometry unit 902 covers the graphical data from the processor 804 and into a screen coordinate system and performs projection and transformation processes to give depth to a displayed object. The resulting primitives (points, lines, polygons, polyhedra, and the like) supplied by the geometry unit 902 are then provided to the scan conversion unit 904. The scan conversion unit 904 generates pixel data based on the received primitives by interpolating straight lines so that each intermediate value need not be individually and separately calculated by the geometry subsystem. The pixel data is then sent to the rasterization unit 906, where Z-buffering, blending, texturing, and antialiasing functions are performed. The resulting pixel values are subsequently stored in the frame buffer 908. The display unit 910 reads the frame buffer 908 directly or via a rasterization unit 906 and transmits the pixel values to the display device 822 for display.

[Warren, col. 10, lines 44-65.]

This passage depicts Warren's graphics subsystem, but fails to disclose or suggest the limitations of claim 1, namely, "wherein the gamma correction is applied only to the primitives defining lines...." This feature is mentioned in the present disclosure, for example, at page 12, lines 1-5:

> The mechanism of the present invention avoids color intensity dampening that occurs with presently available techniques by applying gamma corrections only to the pixels generated for the line by rasterization engine 308.

No teaching or suggestion that gamma correction is only applied to pixels, fragments, or primitives that are part of a line is found in Warren.

Hence, it is respectfully submitted that claim 1 is distinguished form the cited reference. Further, independent claims 7, 13, 19, 20, and 22 include limitations similar to claim 1, and are thereby respectfully believed distinguished from the cited reference. Also, because of their dependence on allowable claims, it is respectfully submitted that all dependent claims are allowable. Hence, all claims of Group A are now believed distinguished from the cited reference. Favorable reconsideration of the claims is respectfully requested.

B. GROUND OF REJECTION 2 (Claims 8, 11, and 12)

B.1. Claims 8, 11, and 12

With respect to claims 8, 11, and 12, Applicant respectfully submits that these claims are enabled by the specification.

Appellants respectfully submit that Claims 8, 11, and 12 are enabled by the specification. More importantly, Appellants interviewed Examiner on two separate occasions with respect to this rejection, and on both occasions Examiner agreed that the rejection was improper. However, this acceptance by Examiner was not reflected in the Office actions sent to Appellants.

First, Appellants addressed this issue in the response dated 7/01/03. That response documented the interview with Examiner Amini conducted 6/23/03. In that interview, as described in the aforementioned response, Examiner Amini agreed that the rejection of claims 8, 11, and 12 under 35 USC §112 first paragraph was improper, and instructed Appellants to

reference that agreement in the reply. Appellants followed Examiner Amini's instructions, as shown in the response dated 7/01/03.

However, in the next Office action, which was final and dated 9/24/03, Appellants noted claims 8, 11, and 12 were again rejected under 35 USC §112 first paragraph. Appellants conducted a second interview with Examiner Amini, this time on 10/16/03. In that interview, Examiner again agreed that the rejection of claims 8, 11, and 12 as not enabled was improper, and instructed Appellants to "ignore" the rejection and to refer to the interview of 10/16/03 in Appellants' response to the final Office action. Appellants followed Examiner's instructions, but also submitted arguments in that response as to why claims 8, 11, and 12 were enabled by the specification.

To wit, Appellants respectfully submit that claim 8's elements, including, "wherein the bus system includes a primary bus and a secondary bus" is enabling. This claim language is supported in the specification at, for example, page 8, lines 5-26, which describes multiple busses, including an expansion bus and a PCI local bus.

Claim 11's limitation of, "wherein the communications unit is an Ethernet adapter," is also enabling, as agreed by the Examiner in the telephone interview.

Finally, claim 12's language of, "wherein the processor unit and memory is located in a graphics adapter," is also enabling. For example, Examiner states in the office action on page 12, "Note: most of graphics adapters are equipped with processor unit and memory chips." Hence, it is respectfully submitted that claim 12 is enabling, as agreed in the interviews referenced above.

The test for enablement is whether the specification teaches those skilled in the art how to make and use the claimed invention without undue experimentation. *In re Vaeck*, 947 F.2d 488, 495, 20 U.S.P.Q.2d 1438, 1444 (Fed. Cir. 1991); *In re Wands*, 858 F.2d 731, 736-37, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988). A specification need not teach what is well-known in the art. *Lindemann Machinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 U.S.P.Q. 481, 489 (Fed. Cir. 1984); *In re Myers*, 410 F.2d 420, 424, 161 U.S.P.Q. 668, 671 (CCPA 1969); *Staehelin v. Secher*, 24 U.S.P.Q.2d 1513, 1516 (Bd. Pat. App. & Int. 1992).

With respect to claims 8, 11, and 12, Appellants respectfully submit that the present specification teaches those skilled in the art to make and use the claimed invention without undue experimentation.

Further, on p. 2 of the Office action dated 9/24/03, Examiner states:

> Examiner agreed to remove the rejection if Applicant submits an explanation for claims 8, 11, and 12. The explanation should explicitly emphasize:
> 1. The advantages of primary bus and secondary bus over prior art?
> 2. What are the advantages having (NIC), while the claim 7 discloses "a data processing system"?
> 3. What are the characteristics of processor unit and memory that is located in a graphics adaptor?

Appellants respectfully submit that, with respect to (1.) above, the advantages of a primary bus and secondary bus over prior art are irrelevant to the question of enablement. The test for enablement is whether the specification teaches those skilled in the art how to make and use the claimed invention without undue experimentation. With respect to (2.) above, Appellants again respectfully submit that any advantages to the claim limitations are irrelevant to the question of enablement. Further, Appellants do not understand the reference to "(NIC)" and claim 7. Claim 11 states:

> 11. The data processing system claim 7, wherein the communications unit is an Ethernet adapter.

Appellants respectfully submit that Ethernet adapters are generally understood by those of ordinary skill in the arts.

With respect to (3.) above, claim 12 states:

> 12. The data processing system of claim 7, wherein the processor unit and memory is located in a graphics adapter.

Appellants respectfully submit that claim 12 is enabling. Locating a processor and memory in a graphics adapter is generally understood by those in the art, and stating the specific characteristics of the processor and memory (*e.g.*, processor speed and memory size) is not necessary to enable one of ordinary skill in the art to make and use the claimed invention.

Therefore, the objection of the specification and claims 8, 11, and 12 under 35 U.S.C. § 112, first paragraph has been overcome. It is noted that claims 8, 11, and 12 are not rejected over

any cited reference. Therefore, Appellants respectfully submit that claims 8, 11, and 12 are in condition for allowance.

For the above reasons, it is respectfully requested that all rejections made by Examiner be reversed.

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CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method in a data processing system for antialiasing lines for display, the method comprising:

receiving graphics data for display, wherein the graphics data includes primitives defining lines;

applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines, wherein the gamma correction is applied only to the primitives defining lines; and

displaying the antialiased lines.

2. The method of claim 1, wherein the gamma correction is performed using a gamma correction table.

3. The method of claim 1, wherein the gamma correction is performed using a gamma correction function.

4. The method of claim 2, wherein the gamma correction table is specified by an application and loaded into a graphics subsystem processing the graphics data for display within the data processing system.

5. The method of claim 3, wherein the gamma correction function is specified by an application and loaded into a graphics subsystem processing the graphics data for display within the data processing system.

6. The method of claim 1, wherein the applying step comprises:

adjusting intensity of pixels defining the primitives.

7. A data processing system comprising:

a bus system;

a communications unit connected to the bus, wherein data is sent and received using the communications unit;

a memory connected to the bus system, wherein a set of instructions and data including a gamma correction table are located in the memory; and

a processor unit connected to the bus system, wherein the processor unit executes the set of instructions to receive graphics data for display, wherein the graphics data includes primitives defining lines; apply a gamma correction to the graphics data on a per primitive basis to form antialiased lines, wherein the gamma correction is applied only to the primitives defining lines; and display the antialiased lines.

8. The data processing system of claim 7, wherein the bus system includes a primary bus and a secondary bus.

9. The data processing system of claim 7, wherein the processor unit includes a single processor.

10. The data processing system of claim 7, wherein the processor unit includes a plurality of processors.

11. The data processing system claim 7, wherein the communications unit is an Ethernet adapter.

12. The data processing system of claim 7, wherein the processor unit and memory is located in a graphics adapter.

13. A data processing system for antialiasing lines for display, the data processing system comprising:

receiving means for receiving graphics data for display, wherein the graphics data includes primitives defining lines;

applying means for applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines, wherein the gamma correction is applied only to the primitives defining lines; and

displaying means for displaying the antialiased lines.

14. The data processing system of claim 13, wherein the gamma correction is performed using a gamma correction table.

15. The data processing system of claim 13, wherein the gamma correction is performed using a gamma correction function

16. The data processing system of claim 14, wherein the gamma correction table is specified by an application and loaded into a graphics subsystem processing the graphics data for display within the data processing system.

17. The data processing system of claim 15, wherein the gamma correction function is specified by an application and loaded into a graphics subsystem processing the graphics data for display within the data processing system.

18. The data processing system of claim 13, wherein the applying means comprises:

means for adjusting intensity of pixel defining the primitives.

19. A computer program product in a computer readable medium for antialiasing lines for display, the computer program product comprising:

first instructions for receiving graphics data for display, wherein the graphics data includes primitives defining lines;

second instructions for applying a gamma correction to the graphics data on a per primitive basis to form the antialiased lines, wherein the gamma correction is applied only to the primitives defining lines; and

third instructions for displaying the antialiased lines.

20. An apparatus comprising:

an input, wherein position information for a pixel is received at the input;

a coverage interpolation unit connected to the input, wherein the coverage interpolation unit generates a coverage valued at a first output in which the coverage value identifies how much of the pixel is covered at a first output;

an alpha interpolation unit connected to the input, wherein the alpha interpolation unit identifies a degree of transparency for the pixel as an opacity value at a second output;

a color interpolation unit connected to the input, wherein the color interpolation unit generates a red, green, and blue value for the pixel at a third output;

a gamma correction unit connected to the first output, wherein the gamma correction unit generates a gamma corrected value for the pixel using the coverage value at a fourth output, wherein the gamma correction unit only generates a gamma corrected value for pixels that are part of a line;

a modulate unit, wherein the modulate unit is connected to the second output and the fourth output, wherein the modulate unit adjusts the gamma corrected value to the opacity value to generate an adjusted gamma corrected value at a fifth output;

a frame buffer having a sixth output, wherein the frame buffer holds a final pixel value; and

a blend unit connected to the fifth output and the third output, wherein the blend unit blends the adjusted gamma corrected value and the red, green, and blue value for the pixel with a current pixel value from the sixth output of the frame buffer to form the final pixel value for display.

21. The apparatus of claim 20, wherein the gamma correction unit is connected to the first output of coverage interpolation unit by a clamp, wherein the clamp prevents values generated by the coverage interpolation unit from going out of a selected range of values.

22. A method in a data processing system for antialiasing lines for display, the method comprising:

generating graphics data for display;

determining whether the graphics data comprises a line;

if the graphics data comprises a line, sending the graphics data to an adapter;

applying a gamma correction to the graphics data to form an antialiased line.

23. The method of claim 22, wherein gamma correction is applied only to pixels generated for the line by a rasterization engine.

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,348	04/12/2001	Daniel Alan Brokenshire	AUS920010010US1	3792

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AMINI, JAVID A	
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The time period for reply, if any, is set in the attached communication.

CLIENT: DOCKET INFORMATION
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Commissioner for Patents

This is to notify Appellant that the Appeal Brief filed September 22, 2005, is defective, the Appeal Brief should in compliance with the headings as set forth in the new rules under 37 C.F.R. 41.37 (c).
Appellant requires submitting new Appeal Brief according to rules 37 C.F.R. 41.37(c).

J.A.